

REMARKS

The fifth Office Action was mailed August 18, 2006 and Applicants now reply.

I. STATUS OF CLAIMS

Claims 1-22 and 24-30 were pending. Claims 2, 3, 23, 27 and 29 are canceled.

Therefore, claims 1, 4-22, 24-26, 28, and 30 are currently pending.

II. OBJECTIONS

The Office Action objected to claim 17 for a dependency issue. Present claim 17 has correct dependency. Reconsideration is respectfully requested.

III. SECTION 112 ISSUES

The Office Action rejected claim 29 as allegedly indefinite. Solely for the purpose of simplifying the case, claim 29 is canceled herein, and therefore the rejection is moot. However, the rejection is incorrect. The second steps of claim 1 and former claim 29 are not identical, indefiniteness under §112 is not the proper basis for rejecting allegedly duplicate claims, and the Office does not have discretion to determine reject claims as “unessential,” at least when an application does not contain an extremely large number of claims.

IV. CLAIMS 1-11, 14-22, 24-30—HILLMER IN VIEW OF DEGEN

The Office Action rejected claims 1-11, 14-22, and 24-30 as allegedly unpatentable over Hillmer in view of Degen. The rejections are respectfully traversed.

A. Neither Hillmer Nor Degen Disclose Applicants' Claimed Internet Identity

Present claim 1 and the other independent claims incorporate subject matter of original claim 2 and claim 3. Thus, present claim 1 and the other independent claims recite that (1) the transaction data evaluated in the claim is data for a particular Internet identity, (b) **determining the second fraud risk score value comprises ... comparing transaction data to historical**

transaction data for other transactions of the same Internet identity, and (c) the particular Internet identity is a **hash of an email address** and a **hash of a card bank identification number**. Neither Hillmer nor Degen, alone or in combination discloses the claimed subject matter. Addressing prior claim 3, the Office Action contends that the claim recites:

“... the various details surrounding the exact comparison data used when evaluating a specific Internet identity. While Hillmer discloses some of these factors ... others that are not disclosed (BIN, hardware ID) would only be an obvious modification to include in Hillmer. The examiner takes Official Notice of the ease in retrieving a BIN number or a NIC card identity. Further, it would have been obvious to one of ordinary skill in the art at the time Applicants’ invention was made to modify Hillmer to include these identifying factors. The motivation to modify Hillmer is within the general knowledge of one [of] ordinary skill in the art, and is to expand the scope of Hillmer to include factors that, as time passes, are understood to be more and more important in determining fraud, as it relates to a form of identity. The system would be dynamic and allow for new factors as fraud experts determine what is relevant and what is not.”

This is incorrect and is legally insufficient to support a rejection under §103. First, present claim 1 does not merely recite what data to compare, or what values to issue as an identity. The claim recites that determining a second fraud risk score value involves a comparison of data from a proposed transaction to historical transaction data **pertaining to the same Internet identity**. Nothing in Hillmer or Degen suggests **using a hash of an email address combined with a hash of a card band identification number** as way to **select historical transaction data for comparison**. The disclosure of non-claimed values provides **no motivation** to select and use the

values that Applicant claims **in the manner claimed**. The rationale of the Office Action is so general and non-specific that it would justify a rejection of a claim to **any identifying values or method of use**, regardless of the differences between Hillmer and the claim or disclosure of the applicant.

Further, the Office Action gives no **evidence** that the asserted motivation actually was within the general knowledge of one of ordinary skill in the art at the time of Applicants' invention. The mere conclusory assertion of the Office that a motivation was within the general knowledge of a skilled artisan is legally insufficient; the existence of the motivation within the general knowledge **must be supported by evidence**—in the words of the Court of Appeals for the Federal Circuit, “some rational underpinning.” *In re Kahn*, 441 F.3d 977, 987-88 (Fed. Cir. 2006); *Alza Corp. v. Mylan Laboratories, Inc.*, No. 06-1019, slip op. at 5 (Fed. Cir. Sept. 6, 2006); *Dystar Textilfarben GMBH & Co Deutschland KG v. C.H. Patrick Co.*, No. 06-1088, slip op. at 8 (Fed. Cir. Oct. 3, 2006) (noting that evidence must show that a claim feature is within common knowledge or nature of the problem).

The rationale for the CAFC's requirement of evidence is to guard against the impermissible use of hindsight in a §103 rejection. Here, the idea that any reference automatically includes a “motivation” to “expand its scope as time passes” allows the Office to treat the reference as a “nose of wax,” to reject any claimed invention based on any prior art reference under the guise that one of skill in the art would think to expand the scope of the reference. A reference does not teach or suggest all things to even a highly skilled artisan. Thus, the question is what Hillmer would have taught a skilled artisan in approximately 2000, or at the time of Applicants' invention, not what Hillmer seems to imply in 2006 with the benefit of Applicants' disclosure. The Office Action does not address confine its analysis to evidence of

the knowledge of a skilled artisan at the time of Applicant's invention. Further, while the Office Action contends that the Hillmer system "would be dynamic and allow for new factors," the Office Action gives no evidence that Hillmer *is* dynamic and *does* allow for new factors, or any other "rational underpinning" that could withstand judicial review. Without such evidence, the rationale of the Office Action is necessarily based on hindsight.

Hillmer has no description or suggestion to use an Internet identity comprising the combination of an e-mail address and a card BIN as a basis for comparing a current transaction with historical transactions. Accordingly, a combination of Hillmer with Degan cannot provide the complete claimed invention. All independent claims include the features described above and are allowable for the reasons given above. Reconsideration is respectfully requested.

B. Neither Reference Discloses the Claimed "Model Score Value"

For claims 1, 24-27, 29, and 30, the Office contends that Hilmer teaches the claim feature of "combining the first fraud risk score value and the second fraud risk score value using a statistical model to result in creating a model score value." This is incorrect. Each of the claims recites a first fraud risk score value, a second fraud risk score value, a model score value, and a final fraud score value. Hillmer in combination with Degen fails to provide all four such values. FIG. 2B(1) of Hillmer shows elements 308, 310, 312, and 314 feeding into a single box, 306, which calculates a fraud multiplier; a skilled artisan combining Degen with Hillmer would simply add another box in parallel with 308-314 and coupled to the combined feed. Thus, there would be no separate first fraud risk score value and second fraud risk score value, only a single fraud multiplier.

Further, neither reference provides a "model score value" in which the first fraud risk score value and second fraud risk score value are combined. The "confidence score" referenced

in the Office Action is one alternative final output of Hillmer at step 326 and step 338. Unlike Hillmer and Degen, Applicants' claim provides for first creating the model score value from two different fraud risk score values, and then blending the model score value with merchant-specific threshold values to result in the final fraud risk score value. Hillmer, alone or in combination with Degen, never reaches such an intermediate result—the model score value—before applying the “vendor’s multiplier point assignments.” Instead, the “vendor’s multiplier points” feed into the final fraud score.

The Office Action glosses over these differences by relying on statements in Hillmer about reordering steps or adding other computations, but none of such broad-brush language would actually teach a skilled artisan to use the four values claimed by Applicant, combined in a model score value and blended with merchant information to provide a final fraud risk score value. Accordingly, any combination of Hillmer and Degen fails to provide the complete claimed invention. Reconsideration is respectfully requested.

C. Claim 7—Hillmer Does Not Describe Selective Retrieving and Discontinuing

Claim 7 recites “retrieving one or more records of historic transaction data pertaining to past transactions associated with the transaction data; when one of the records of historic transaction data is found to contain a fraud list tag, discontinuing further retrieval of such records; determining the second fraud risk score value associated with the electronic commerce transaction based on only the retrieved records of historical transaction data in comparison to the transaction data.” The Office Action contends that the claimed features are found in Hillmer 8:7-22, FIG. 2B(1), 12:20-24, and 11:55-65. This is incorrect.

In the claimed approach, historic transaction data records are retrieved **only until one record is found to contain a fraud list tag** and then retrieval ends, and the fraud risk score

value comparison proceeds with only the retrieved records. Hillmer has no description of anything other than always considering all historic records of the customer. As stated at 7:42, “The consumer information provider 224 first computes a fraud multiplier for the transaction 100 (Block 306). The fraud multiplier is a score based on the value of the transaction parameters 116 and whether the transaction parameters authenticate against databases 308, 310, 312 of known information.” Database 308 contains “information about one or more of their past transactions” (8:3-4), database 310 is a negative account database and database 312 is a negative address database (8:7-14). Therefore, in Hillmer, computing a fraud multiplier **always requires considering all records in the databases**; there is no description of retrieving **some** historical transaction data records and **stopping** when a fraud list tag is reached. The claimed approach considers **fewer** records than Hillmer and Hillmer clearly **teaches away** from the claimed approach. Reconsideration is respectfully requested.

D. Claim 8—Hillmer Does Not Suggest Cutting Off Record Retrieval

Claim 8 recites “retrieving one or more records of historic transaction data pertaining to past electronic commerce transactions associated with the transaction data; when a specified amount of the records of historic transaction data is retrieved and further records of historic transaction data remain to be retrieved, discontinuing further retrieval of such records; determining the second fraud risk score value associated with the electronic commerce transaction based on only the retrieved records of historical transaction data in comparison to the transaction data.” The Office Action admits that no reference discloses the claimed feature, and instead contents that the claimed feature “is an obvious modification to Hillmer” on the basis that “usually **there can be** a cutoff limit on the amount of checking one might conduct in determining a fraudulent transaction” (emphasis added), which the Office contends would be obvious based

on the motivation “to somehow determine fraud quickly and with limited data, as opposed to doing a painstaking, endless review of records.”

This is incorrect. With the asserted motivation, a skilled artisan might equally decide to use a supercomputer to process records, rather than to cut off retrieving records at a particular time. The rationale of the Office Action provides no reason that a skilled artisan would pick **Applicants’ particular claimed approach** from among multiple ways to achieve rapid fraud results. Further, nearly every data processing patent attempts to convince the reader that its approach is faster and better, but such puffery does not **actually suggest the particular claimed approach**. Moreover, the use of the present tense verb in the Office Action’s rationale—“there can be” rather than “there would have been”—reveals that the Office Action is applying hindsight based on Applicants’ disclosure rather than determining and applying what was known at the time of Applicant’s invention, years ago. The use of hindsight is not allowed as a substitute for failing to find a claimed feature in the prior art. *Alza Corp. v. Mylan Laboratories, Inc.*, No. 06-1019, 2006 U.S. App. LEXIS 22616 (Fed. Cir. Sept. 6, 2006), at *7 (slip op. at 4-5). Because none of the references suggest the claimed cut-off approach, and there is no evidence in the record that a skilled artisan would have thought of that particular approach in 2000, the rejection is unsupported. Reconsideration is respectfully requested.

V. CLAIMS 12-13—HILMER IN VIEW OF DEGEN AND BAKER

The Office Action rejected claims 12-13 as allegedly unpatentable over Hillmer in view of Degen and further in view of Baker. The rejections are respectfully traversed.

The Office Action admits that Hillmer does not disclose the process of testing bi-gram values on transaction data, but asserts that “using bi-gram analysis is old and well known,” citing Baker. However, Applicants are not claiming *all* bi-gram analysis, or using bi-gram analysis *per*

se. Claims 12-13 recite a particular use of bi-grams involving retrieving **probability values representing a probability that a particular bi-gram is found in genuine text** and generating a penalty value when bi-grams do not likely represent genuine text. Baker has no suggestion to use bi-grams for any purpose in fraud detection and certainly no specific suggestion to use bi-grams to test genuineness of transaction data or generate penalty values.

Perhaps recognizing the lack of actual suggestion in Baker, the Office Action contends that a skilled artisan would have combined Hillmer to include bi-gram analysis. Applicants disagree. The Office Action contends that “the motivation for such a combination is within the general knowledge of one of ordinary skill in the art, and is simply to create a fraud detection mechanism which performs two types of evaluations in a single process, thereby saving time and money.” However, the Office Action gives no **evidence** that such a motivation actually was within the general knowledge of one of ordinary skill in the art years ago at the time of Applicants’ invention. Further, even if such a motivation existed, it provides no basis for a skilled artisan to combine Hillmer with bi-gram analysis, or Baker, as opposed to any other type of evaluation. As with claim 1, the motivation adduced by the Office Action is so general and so devoid of supporting evidence that it can support virtually any combination of references and must be based upon impermissible hindsight. The fact is that no **actual evidence** in the record, as opposed to conclusory statements in the Office Action, supports the specifically claimed use of bi-grams for determining genuineness of text into a fraud detection system as claimed. Reconsideration is respectfully requested.

VI. CLAIMS 14-21—HILLMER IN VIEW OF DEGEN

The Office Action rejected claims 14-21 as allegedly unpatentable over Hillmer in view of Degen. The rejections are respectfully traversed.

The Office Action admits that Hillmer does not teach the steps recited in the claims. The Office Action recasts the claims as allegedly reciting “comparing, on a superficial level, pieces of information,” and then rejects the recast claims. This is improper; there is no substitute for the rigorous and meticulous work of addressing each claim in its entirety. The Office has the burden to show that the prior art or a recognized source discloses, teaches or suggests all features of each claim in the combination that is claimed. In particular, the Office Action contends that the features of claims 14-21 are “the type of information that a combination of Hillmer and Degen anticipates.” This is insufficient to support a rejection under §103. The question is whether the references or a recognized source of information actually describe, teach or suggest the specific subject matter that is claimed.

The Office Action seems to view claims 14-21 as merely reciting an agglomeration of data fields, but this is incorrect. For example, claim 14 recites that “one of the plurality of tests automatically determines whether a city value in the transaction data is within an area code value of the transaction data, by ... determining a latitude value and a longitude value that represent a position of a city identified in the city value; ... based on the latitude value, the longitude value, the range of latitude values, and the range of longitude values, determining whether the city identified in the city value is within the area code identified in the area code value; applying a penalty to the electronic commerce transaction when the city identified in the city value is not within the area code identified in the area code value.” The mere identification of one of the “pieces” of information used in the claim cannot possibly suggest the entirety of the claim, which includes determining whether a city value is within an area code value, and applying a penalty value when it is not.

The Office Action simply glosses over these specific steps as if they are not in the claim, and uses a similar approach for claims 15-21. As an example, claim 15 recites automatically determining whether a city value in the transaction data is within an email domain of the transaction data, by ... determining a latitude value and a longitude value that represent a position of a city identified in the city value; determining a range of latitude values and a range of longitude values associated with an email domain portion of the email address value; based on the latitude value, longitude value, the range of latitude values, and the range of longitude values, determining whether the city identified in the city value is within the email domain indicated in the email address value; applying a penalty to the electronic commerce transaction when the city identified in the city value is not within the area code identified in the area code value.” Any mere disclosure of city values and domain names in Degen cannot possibly suggest **the particular operations** recited in the claim, including determining whether a city is within a domain and applying a penalty if not.

Claims 16-17 depend from claim 15 and include the features described above. Claim 18 recites that “one of the plurality of tests automatically determines whether a country value in the transaction data is proximate to a bank referenced in a bank identification number of a credit card number in the transaction data, by ... determining a relative distance between a country identified in the country value and a bank associated with the bank identification number; based on the relative distance between the country and the bank, determining whether the country is greater than a specified relative distance from the bank; applying a penalty to the electronic commerce transaction when the country is greater than the specified relative distance from the bank.” Neither Hillmer nor Degen, alone or in combination, suggest performing the **particular operations** of claim 18, including determining a relative distance of a country value and bank,

and applying a penalty when the distance is greater than a specified relative distance. Any mere disclosure in Degen of a country value or BIN cannot suggest the **particular use claimed** of such data values.

Thus, Office Action misinterprets an identification of a discrete value in Degen as a disclosure of a claimed operation. The two are strikingly different. An Office Action that does not actually address each and every feature or step of a claim, and that does not show that each and every feature, step or limitation of each claim is in the prior art, or within a recognized source such as the general knowledge of a skilled artisan at the time of the invention, or within the nature of the problem, all as shown by appropriate evidence, does not meet the burden of the Office under §103, or the standards of the Court of Appeals for the Federal Circuit.

The deficiency of the Office Action's approach is apparent in the Office Action's use of the same alleged motivation as in claims 12-13—"to perform multiple types of evaluations in a single process, thereby saving time and money." As with claims 12-13, the Office Action gives no **evidence** that such a motivation actually was within the general knowledge of one of ordinary skill in the art in 2000 or at Applicants' date of invention. Further, even if such a motivation existed, it provides no basis for a skilled artisan to introduce the specific data analysis, such as a geographical proximity approach as in claim 14, as opposed to any other type of evaluation. As with claim 1, the motivation adduced by the Office Action is so general and so devoid of supporting evidence that it can support virtually any combination of references and must be based upon impermissible hindsight. The fact is that no **actual evidence** in the record, as opposed to conclusory statements in the Office Action, supports combining Hillmer with anything that shows the subject matter of claims 14-21. Reconsideration is respectfully requested.

VII. CONCLUSIONS & MISCELLANY

For the reasons set forth above, all pending claims are patentable over the art of record, including the art cited but not applied. Accordingly, allowance of all claims is respectfully requested.

No extension fee is believed to be due. However, to the extent necessary, Applicants petition for an extension of time under 37 C.F.R. § 1.136. The Commissioner is authorized to charge any fee that may be due in relation to this application to our Deposit Account No. 50-1302.

Respectfully submitted,

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